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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,282	12/21/2001	Keith L. House	SP01-347	1344
22928	7590	08/06/2004	EXAMINER	
CORNING INCORPORATED			HOFFMANN, JOHN M	
SP-TI-3-1			ART UNIT	
CORNING, NY 14831			PAPER NUMBER	
			1731	

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/027,282	HOUSE ET AL.	
	Examiner	Art Unit	
	John Hoffmann	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 1-22 and 37-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, specie C in the reply filed on 13 July 2004 is acknowledged. The traversal is on the ground(s) that the wrong claims were indicated for each group. Whereas Applicant is correct in that the wrong claims were indicated for the group, there was no reason as to why the two inventions were not restrictable. The claims are restricted as indicated by Applicant, not by the Office.

The requirement is still deemed proper and is therefore made FINAL.

In the election, Applicant indicates that claims 1, 2 and 8-14 fall under species C. However, from [00054], [00043], [00046] and other places, claim 1 (eddy diffusion) is directed to other species (at least B and F). Claim 1 is not generic to elected species C, or is it specific there to. Therefore:

Claims 1-22 and 37-43 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 13 July 2004.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Jang 4389229.

Most of the claim features are clear to see from the drawings (fig 1-2). The only things not shown are the pressure and mass flow rate limitations. The last line of claim 1 discloses the maintaining of a constant pressure. Col. 5, lines 18-20 teaches an embodiment where one adjusts oxygen to maintain the pressure. Oxygen is a glass precursor in that there are two atoms of oxygen in each silica molecule.

As to the pressure being 99% of "the soot formation pressure". First, as indicated by Applicant's specification [00033] that this pressure depends upon the "given temperature". The claim does not specify any limitation related to pressure. It is deemed that the temperature upstream of the Jang hot zone is well below the "soot formation pressure." In other words, the phrase "the soot formation pressure" is interpreted to be "a soot formation pressure".

As to claims 24-26: it is deemed that the pressure is well below the claimed values, because Jang doesn't even have enough pressure to get a non-soot deposition upstream of hot zone. If Jang did have a high enough pressure, it would have deposited on the cylinder prior to getting to the hot zone.

Claim 27: see col. 1, lines 55-65 of Jang. Since the passageway is restricted, one would realize that less gas can get through. This would mean that one would have to put less gas in which would require a reduction of gas flow rate.

Claim 28: claim 23 indicates that the mass flow rate refers to "at least one glass precursor material". Thus the mass flow rate can encompass two glass precursor materials, such as the combination of SiCl₄ and oxygen. Since the amount of oxygen is changed at least one of the following also necessarily must change/modulate : SiCl₄ + O₂, SiCl₄ + O₂ + GeCl₄ or SiCl₄ + O₂ + GeCl₄ + POCl₃.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jang 4389229

Claims 31-32, it would have been obvious to have the modulation as stepwise or continuous – depending upon the sensitivity of the equipment that one has. For example, if one has a mass flow system that has increments of 0.1 ml/min, then it would have been obvious to have it stepwise where the steps are at least 0.1 ml/min. But if one has a continuous system then that should be used. There would be nothing unobvious in either system.

Claim 33: it would have been obvious to have as high a rate as reasonably possible so as to make as much fiber as possible. It is reasonable to expect that a very large diameter preform would have a higher deposition rate – just because it has a larger surface area.

Claim 34 is met because one can pick a value for C1 so as to make the equation accurate for the initial deposition.

Claims 35-36: as with claim 34, one can pick values so that the equation is true for an instantaneous pressure and an instantaneous deposition rate.

Claims 23 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuppers 4314833.

Example 1 of Kupper teaches the invention. See also col. 2, lines 30-46. However, Kupper does not disclose changing the flow rates or keeping the pressure constant. Since Kupper teaches to have the pressure at 13 mbar, it would have been obvious to keep it at 13 mbar at all times – because one would immediately interpret example 1 as not having any other pressure during the process. The mass flow rate of GeCl_4 is clearly modulated. As to the intended result “to maintain the pressure”: it is impossible to read someone’s mind to determine why one increases a pressure – all that matters is that one would keep the pressure at 13 mbar.

Claim 29 is clearly met.

Claim 30 it would have been obvious to keep the power at 200 W – because Kupper teaches to use that power and does not teach any other power.

Claim 33: region B of figure 1 clearly teaches that 2.2 g/min is possible.

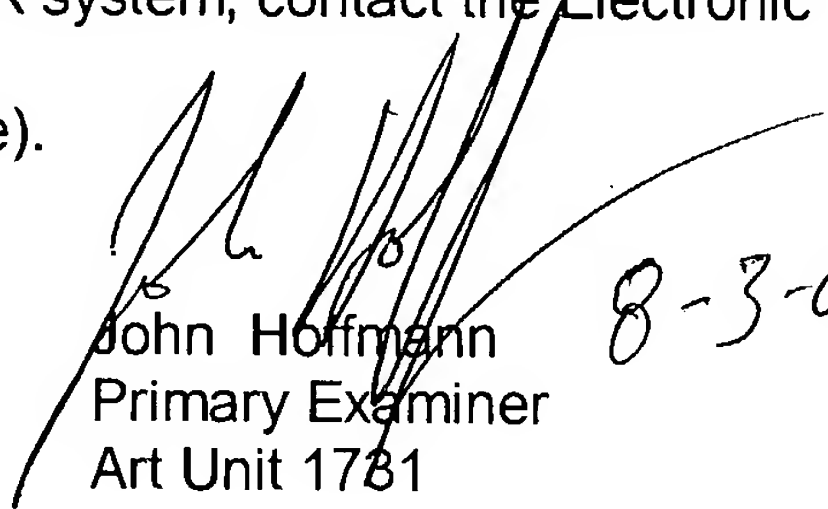
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Peckman, Ackermann and both Geittner references are cited directed to the disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

8-3-01

jmhshohin